GenCore version 4.5

OM protein - protein search, using sw model

Run on: May 23, 2001, 14:17:50 ; Search time 20.88 Seconds
(without alignments)
1204.589 Million cell updates/sec

Title: US-08-883-036A-2
Perfect score: 2327
Sequence: 1 MEQRGQNAPAASGARKRHGP.....HLLSSGKFMYLEGNADSAMS 440

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 390729 seqs, 57163235 residues

Total number of hits satisfying chosen parameters: 390729

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_0401:*
1: /SIDS6/gcgdata/geneseq/geneseqp/AA1980.DAT:*
2: /SIDS6/gcgdata/geneseq/geneseqp/AA1981.DAT:*
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22: /SIDS6/gcgdata/geneseq/geneseqp/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2317	99.6	440	19	W79260	Tumour necrosis fa
2	2313	99.4	440	20	Y05725	Tumour necrosis fa
3	2313	99.4	440	21	B01340	TNF-related apopot
4	2151.5	92.5	411	19	W79083	Human death domain
5	2151.5	92.5	411	20	W93608	Human killer adria
6	2151.5	92.5	411	21	B29790	Human death domain
7	2143.5	92.1	411	19	W76827	Human TR6 protein.
8	2141.5	92.0	411	19	W79261	Tumour necrosis fa
9	2137.5	91.9	411	20	W93576	Human hAPO8 protei
10	2137.5	91.9	411	20	Y00932	Human DR5 protein
11	2135.5	91.8	411	20	W88410	Human Apo-2 ligand
12	2135.5	91.8	411	20	W83321	Human Apo-2 protei
13	2135.5	91.8	411	21	Y55805	Human Apo-2 polype
14	1785	76.7	350	20	Y00934	Human DR5s protein
15	1578.5	67.8	303	19	W76828	Human TR6 partial
16	1061.5	45.6	410	20	W93577	Human APORP protei
17	1061.5	45.6	468	19	W64483	Human DR4 protein.
18	1061.5	45.6	468	20	Y31602	Human death recept
19	1061.5	45.6	468	20	W93609	Human DR4 protein.
20	1061.5	45.6	468	21	Y72022	Human Death Domain
21	1061.5	45.6	468	21	B08546	Amino acid sequenc
22	1061.5	45.6	468	21	B01339	TNF-related apopot
23	1061.5	45.6	468	22	B49241	Human DR4 protein.
24	1059.5	45.5	468	21	Y72023	Human Death Domain
25	1051	45.2	467	22	B50896	Human DR4. Homo s
26	869	37.3	386	20	W99018	Human TRAIL recept
27	869	37.3	386	20	W92792	Human TNF receptor
28	869	37.3	386	21	B01341	TNF-related apopot
29	869	37.3	386	21	Y69991	Human receptor-ass
30	869	37.3	386	22	B50892	Human TR10 recepto
31	865	37.2	386	20	W98200	RTD, inhibitor of
32	861	37.0	386	20	Y04144	Human Tango-74 pro
33	855	36.7	386	20	W99019	Human TRAIL recept
34	467	20.1	299	19	W76331	Human tumour necro
35	467	20.1	299	20	Y29864	Human secreted pro
36	467	20.1	299	20	Y05744	Tumour necrosis fa
37	467	20.1	299	20	Y00933	Human TRAIL-R3 pro
38	467	20.1	299	20	W94671	Human TNF-related
39	467	20.1	299	20	W88409	Human Apo-2DcR pro
40	467	20.1	299	21	B01343	Death receptor. H
41	464.5	20.0	368	19	W41360	tvb polypeptide.
42	448	19.3	259	19	W64668	Human TRID protein
43	448	19.3	259	20	W93578	Human hAPO9 protei
44	448	19.3	259	20	W88408	Human Apo-2DcR pro
45	448	19.3	259	22	B53091	Human angiogenesis

ALIGNMENTS

RESULT 1
W79260
ID W79260 standard; Protein; 440 AA.
XX
AC W79260;
XX
DT 15-FEB-1999 (first entry)
XX
DE Tumour necrosis factor receptor related protein Tango-63d.
XX
KW Tango-63d; tumour necrosis factor receptor related protein; human;
KW apoptosis; cancer; autoimmune disease; neurodegenerative disease.
XX
OS Homo sapiens.
XX
PN WO9846643-A1.
XX
PD 22-OCT-1998.
XX
PF 16-APR-1998; 98WO-US07694.
XX
PR 16-APR-1997; 97US-0843652.
XX
PA (MILL-) MILLENNIUM BIOTHERAPEUTICS INC.
XX
PI Holtzman D;
XX
DR WPI; 1998-594562/50.
DR N-PSDB; V62672.
XX
PT Isolated tumour necrosis factor related proteins - used to develop
PT products for the diagnosis and treatment of apoptosis-related
PT disorders, e.g. cancers, autoimmune disorders or neurodegenerative
PT disorders

```
XX
PS   Claim 4; Fig 1; 88pp; English.
XX
CC   This is the amino acid sequence of Tango-63d, a new member of the
CC   human tumour necrosis factor receptor superfamily.  It was deduced
CC   from a human prostate cDNA clone sequence (see V62672).  2
CC   Different forms of Tango-63, i.e. Tango-63d and Tango-63e (see
CC   W79261), have been identified.  These are identical with the
CC   exception of the deletion of amino acids 183-211 of Tango-63d in
CC   Tango-63e.  The invention also encompasses nucleic acid molecules
CC   encoding Tango-63d and -63e, vectors containing these nucleic acid
CC   molecules, cells harboring recombined DNA encoding Tango-63d and/or
CC   -63e, fusion proteins that include Tando-63d and/or -63e, transgenic
CC   animals that express Tango-63d and/or -63e, and recombinant knockout
CC   animals that fail to express Tango-63d and/or -63e.  Methods are
CC   provided for the diagnosis and treatment of disorders associated
CC   with either an abnormally high or an abnormally low rate of
CC   apoptotic cell death.  Inhibitors can be used for treating e.g.
CC   cancers, autoimmune disorders (e.g. systemic lupus erythematosus
CC   and immune-mediated glomerulonephritis), and viral infections (e.g.
CC   herpesviruses, poxviruses, and adenoviruses).  Agonists can be used
CC   for treating e.g. neurodegenerative diseases, e.g. Alzheimer's
CC   disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS),
CC   Huntington's disease, retinitis pigmentosa, spinal muscular atrophy,
CC   various forms of cerebellar degeneration, anaemia, myelodysplastic
CC   syndrome, ischemic injury, myocardial infarction, cerebral ischemia
CC   or toxin-induced injury.  In addition, T cell mediated diseases,
CC   including AIDS, autoimmune diseases such as rheumatoid arthritis,
CC   and type I diabetes, septic shock, cerebral malaria, graft
CC   rejection, cytotoxicity, cachexia, and inflammation can be treated
CC   by altering the expression or activity of the polypeptides.  The
CC   products can also be used for detection, diagnosis and screening
CC   assays.
XX
SQ   Sequence   440 AA;


  Query Match             99.6%;  Score 2317;  DB 19;  Length 440;
  Best Local Similarity   99.8%;  Pred. No. 3.6e-185;
  Matches  439;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1 MEQRGQNAPAASGARKRHGPGPREARGARPGPRVPKTLVLVVAAVLLLVSAESALITQQD 60
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Db       1 meqrgqnapaasgarkrhgpgpreargarpglrvpktlvlvvaavlllvsaesalitqqd 60

Qy      61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 lapqqraapqqkrsspseglcppghhisedgrdcisckygqdysthwndllfclrctrcd 120

Qy     121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 sgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180

Qy     181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     181 kesgtkhsgeapaveetvtsspgtpaspcslsgiiigvtvaavvlivavfvcksllwkkv 240

Qy     241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 lpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqemevqepaeptgv 300

Qy     301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 nmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadlvpfdsweplmrk 360

Qy     361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
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Db     361 lglmdneikvakaeaaghrdtlytmlikwvnktgrdasvhtlldaletlgerlakqkied 420

Qy     421 HLLSSGKFMYLEGNADSAMS 440
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Db     421 hllssgkfmylegnadsams 440
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```
RESULT   2
Y05725
ID   Y05725 standard; Protein; 440 AA.
XX
AC   Y05725;
XX
DT   19-JUL-1999  (first entry)
XX
DE   Tumour necrosis factor receptor TRAIL-R2.
XX
KW   TRAIL-2; tumour necrosis factor receptor; apoptosis; cancer;
KW   therapy.
XX
OS   Mammalia.
XX
FH   Key             Location/Qualifiers
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FT   Protein         52..440
FT                   /note= "mature protein"
FT   Region          81..137
FT                   /note= "cysteine-rich repeat unit I"
FT   Region          139..178
FT                   /note= "cysteine-rich repeat unit II"
FT   Domain          211..231
FT                   /note= "transmembrane domain"
FT   Domain          353..422
FT                   /note= "death domain"
XX
PN   WO9912963-A2.
XX
PD   18-MAR-1999.
XX
PF   11-SEP-1998;   98WO-US19029.
XX
PR   06-MAY-1998;   98US-0084422.
PR   12-SEP-1997;   97US-0058631.
XX
PA   (BIOJ ) BIOGEN INC.
XX
PI   Tschopp J;
XX
DR   WPI; 1999-276942/23.
DR   N-PSDB; X25348.
XX
PT   Novel tumor necrosis factor receptor proteins TRAIL-R2 and TRAIL-R3
XX
PS   Disclosure; Page 27; 28pp; English.
XX
CC   The present sequence represents TRAIL-R2, a novel mammalian
CC   cysteine-rich receptor of the tumour necrosis factor receptor family.
CC   The invention is related to novel receptors for TRAIL, i.e. TRAIL-2
CC   and TRAIL-3 (see Y05726).  TRAIL-2 is structurally similar to the
CC   death domain-containing receptor TRAIL-R1.  Its cytoplasmic domain
CC   binds to the adaptor molecules FADD and TRADD, and can also
CC   associate with TRAIL-R1, suggesting that TRAIL may signal through a
CC   TRAIL-R1/TRAIL-R2 heteroreceptor signalling complex.  TRAIL-R2
CC   shows a broad tissue distribution.  A method for preventing or
CC   reducing the advancement, severity or effects of an immunological
CC   disease involves administering a TRAIL-R2 or TRAIL-R3 blocking
CC   agent such as a soluble TRAIL-R (preferably comprising a human
CC   immunoglobulin Fc domain) and an antibody.  A method of treating
CC   cancer involves administration of antibodies against TRAIL-R3 or
CC   TRAIL-R2.  A method of inducing cell death involves administration
CC   of an agent capable of inhibiting the binding of TRAIL-R2 or -R3 to
CC   its ligand.
XX
SQ   Sequence   440 AA;


  Query Match             99.4%;  Score 2313;  DB 20;  Length 440;
  Best Local Similarity   99.5%;  Pred. No. 7.7e-185;
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Db      1 meqrgqnapaasgarkrhgpgpreargarpglrvpktlvlvvaavlllvsaesalitqqd 60

Qy     61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
          |||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 lapqqrvapqqkrsspseglcppghhisedgrdcisckygqdysthwndllfclrctrcd 120

Qy    121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 sgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180

Qy    181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
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Db    181 kesgtkhsgeapaveetvtsspgtpaspcslsgiiigvtvaavvlivavfvcksllwkkv 240

Qy    241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy    301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360
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Db    301 nmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadlvpfdsweplmrk 360

Qy    361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
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Qy    421 HLLSSGKFMYLEGNADSAMS 440
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Db    421 hllssgkfmylegnadsams 440


RESULT   3
B01340
ID   B01340 standard; Protein; 440 AA.
XX
AC   B01340;
XX
DT   25-SEP-2000  (first entry)
XX
DE   TNF-related apopotosis inducing ligand (TRAIL) receptor-2.
XX
KW   UL144; death receptor; apoptosis; programmed cell death; FAS;
KW   TNF-R1; TRAMP; DR-6; TRAIL; modulation; treatment; cancer; virus;
KW   human.
XX
OS   Homo sapiens.
XX
PN   WO200034335-A2.
XX
PD   15-JUN-2000.
XX
PF   03-DEC-1999;   99WO-US26035.
XX
PR   04-DEC-1998;   98US-0205018.
XX
PA   (SCHE ) SCHERING CORP.
XX
PI   Leong C,  Phillips JH;
XX
DR   WPI; 2000-423383/36.
XX
PT   Purified or recombinant polypeptide for modulating apoptosis comprises
PT   a sequence which binds to an antibody specific for UL144 or its
PT   fragments
XX
PS   Disclosure; Page 71-73; 76pp; English.
XX
CC   A pure or recombinant polypeptide which binds to a polyclonal antibody
CC   specific for the mature UL144 is useful for screening molecules which
CC   block induction of apoptosis or interfere with antiapoptotic activity.
CC   The polypeptide is also useful for modulating apoptosis and useful in
CC   treatment of conditions associated with abnormal physiology or
CC   development, such as cancer or degenerative conditions and for
CC   regulation of viral infection and replication. At least five
CC   different death receptors are known, which include the CD95
CC   (Fas/APO-1), the TNF receptor-1, TNF receptor apoptosis-mediated
CC   protein (TRAMP), death receptor-6 (DR-6), and TNF-related
CC   apoptosis-inducing ligand (TRAIL) receptors 1, 2 and 4.
XX
SQ   Sequence   440 AA;


  Query Match             99.4%;  Score 2313;  DB 21;  Length 440;
  Best Local Similarity   99.5%;  Pred. No. 7.7e-185;
  Matches  438;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy      1 MEQRGQNAPAASGARKRHGPGPREARGARPGPRVPKTLVLVVAAVLLLVSAESALITQQD 60
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Db      1 meqrgqnapaasgarkrhgpgpreargarpglrvpktlvlvvaavlllvsaesalitqqd 60

Qy     61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
          |||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 lapqqrvapqqkrsspseglcppghhisedgrdcisckygqdysthwndllfclrctrcd 120

Qy    121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 sgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180

Qy    181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 kesgtkhsgeapaveetvtsspgtpaspcslsgiiigvtvaavvlivavfvcksllwkkv 240

Qy    241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    241 lpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqemevqepaeptgv 300

Qy    301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    301 nmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadlvpfdsweplmrk 360

Qy    361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    361 lglmdneikvakaeaaghrdtlytmlikwvnktgrdasvhtlldaletlgerlakqkied 420

Qy    421 HLLSSGKFMYLEGNADSAMS 440
          ||||||||||||||||||||
Db    421 hllssgkfmylegnadsams 440


RESULT   4
W79083
ID   W79083 standard; Protein; 411 AA.
XX
AC   W79083;
XX
DT   11-JAN-1999  (first entry)
XX
DE   Human death domain containing receptor 5 (DR5).
XX
KW   Death domain containing receptor 5; DR5; human; apoptosis;
KW   tumour necrosis factor receptor; cancer; autoimmune disease;
KW   inflammation; infection; AIDS; graft versus host disease;
KW   neurodegeneration; systemic lupus erythematosus;
KW   glomerulonephritis; rheumatoid arthritis; graft rejection;
KW   osteoarthritis; psoriasis; septicaemia; inflammatory bowel disease;
KW   Alzheimer's disease; Parkinson's disease; retinitis pigmentosa;
KW   amyotrophic lateral sclerosis; aplastic anaemia; ischaemia;
KW   septic shock; cachexia; anorexia; agonist; antagonist; therapy;
KW   diagnosis.
XX
OS   Homo sapiens.
XX
```

```
FH   Key             Location/Qualifiers
FT   Peptide         1..51
FT                   /label= Sig_peptide
FT   Protein         52..411
FT                   /label= Mat_protein
FT   Domain          52..184
FT                   /label= Extracellular
FT   Domain          185..208
FT                   /label= Transmembrane
FT   Domain          209..411
FT                   /label= Intracellular
FT   Domain          324..391
FT                   /label= Death
XX
PN   WO9841629-A2.
XX
PD   24-SEP-1998.
XX
PF   17-MAR-1998;   98WO-US05377.
XX
PR   29-JUL-1997;   97US-0054021.
PR   17-MAR-1997;   97US-0040846.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Gentz RL,  Ni J,  Rosen CA,  Su JY,  Yu G;
XX
DR   WPI; 1998-531568/45.
DR   N-PSDB; V61469.
XX
PT   New isolated death domain containing receptor 5 - used to develop
PT   products for treating e.g. cancers, autoimmune disorders, viral
PT   infections, inflammation, graft-versus-host disease or
PT   neurodegenerative disorders
XX
PS   Claim 4; Fig 1A-B; 89pp; English.
XX
CC   This is the amino acid sequence of human death domain containing
CC   receptor 5 (DR5), deduced from an isolated DR5 nucleic acid (see
CC   V61469).  DR5 is a novel member of the tumour necrosis factor
CC   receptor (TNFR) family that has been shown to bind TRAIL, and which
CC   has the ability to induce apoptosis.  It shows homology to human
CC   TNFR1, FAS and DR3.  DR5 cDNA has been identified in primary
CC   dendritic cells, endothelial tissue, spleen, chronic lymphocytic
CC   leukaemia, and human thymus stromal cells.  The isolated nucleic
CC   acid can be used in the recombinant production of DR5 polypeptides,
CC   e.g. the extracellular, transmembrane, intracellular domains,
CC   mature protein or soluble polypeptides lacking the transmembrane
CC   domain; vectors, host cells and recombinant methods of producing
CC   the polypeptides are claimed.  DR5 polypeptides can be used to
CC   identify agonists and antagonists, and to raise antibodies.
CC   Agonists, which increase DR5 mediated signalling, can be used to
CC   treat diseases in which decreased apoptosis is exhibited, e.g.
CC   cancers, autoimmune disorders (such as systemic lupus erythematosus
CC   and immune-related glomerulonephritis rheumatoid arthritis) and
CC   viral infections (such as herpes viruses, pox viruses and
CC   adenoviruses), inflammation, graft versus host disease, acute graft
CC   rejection, chronic graft rejection, rheumatoid arthritis,
CC   osteoarthritis, psoriasis, septicemia, and inflammatory bowel
CC   disease.  Antagonists, which decrease DR5 mediated signalling, can
CC   be used to treat diseases in which apoptosis is exhibited, e.g.
CC   AIDS, neurodegenerative disorders (such as Alzheimer's disease,
CC   Parkinson's disease, amyotrophic lateral sclerosis, retinitis
CC   pigmentosa, cerebellar degeneration), myelodysplastic syndromes
CC   (such as aplastic anaemia), ischemic injury (such as that caused by
CC   myocardial infarction, stroke and reperfusion injury), toxin-induced
CC   liver disease (such as that caused by alcohol), septic shock,
CC   cachexia and anorexia.  The products can also be used for detection,
CC   diagnosis and drug screening.
XX
SQ   Sequence   411 AA;
```

```
  Query Match           92.5%;  Score 2151.5;  DB 19;  Length 411;
  Best Local Similarity  93.4%;  Pred. No. 2.1e-171;
  Matches  411;  Conservative    0;  Mismatches    0;  Indels   29;  Gaps    1;

Qy       1 MEQRGQNAPAASGARKRHGPGPREARGARPGPRVPKTLVLVVAAVLLLVSAESALITQQD 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 meqrgqnapaasgarkrhgpgpreargarpgprvpktlvlvvaavlllvsaesalitqqd 60

Qy      61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 lapqqraapqqkrsspseglcppghhisedgrdcisckygqdysthwndllfclrctrcd 120

Qy     121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 sgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180

Qy     181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
           ||                          ||||||||||||||||||||||||||||
Db     181 ke--------------------------sgiiigvtvaavvlivavfvcksllwkkv 211

Qy     241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     212 lpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqemevqepaeptgv 271

Qy     301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     272 nmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadlvpfdsweplmrk 331

Qy     361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     332 lglmdneikvakaeaaghrdtlytmlikwvnktgrdasvhtlldaletlgerlakqkied 391

Qy     421 HLLSSGKFMYLEGNADSAMS 440
           ||||||||||||||||||||
Db     392 hllssgkfmylegnadsams 411
```

```
RESULT   5
W93608
ID   W93608 standard; Protein; 411 AA.
XX
AC   W93608;
XX
DT   18-JUN-1999  (first entry)
XX
DE   Human killer adriamycin-inducible protein.
XX
KW   Killer protein; adriamycin inducible; human; chromosome 8p21; diagnosis;
KW   p53-inducible; apoptosis-mediating activity; treatment; animal model;
KW   neoplastic disease.
XX
OS   Homo sapiens.
XX
PN   WO9902653-A1.
XX
PD   21-JAN-1999.
XX
PF   10-JUL-1998;   98WO-US14495.
XX
PR   11-MAR-1998;   98US-0077661.
PR   11-JUL-1997;   97US-0052305.
PR   04-AUG-1997;   97US-0054710.
PR   30-SEP-1997;   97US-0060473.
PR   11-MAR-1998;   98US-0077526.
PR   11-MAR-1998;   98US-0077628.
XX
PA   (UYPE-) UNIV PENNSYLVANIA.
XX
PI   El-Deiry WS;
XX
DR   WPI; 1999-120857/10.
DR   N-PSDB; X23721.
XX
```

```
PT   A new nucleic acid encodes a p53-induced protein (Killer) - which
PT   induces apoptosis and is useful in the diagnosis and treatment of
PT   neoplastic diseases
XX
PS   Claim 8; Page 44; 65pp; English.
XX
CC   This invention describes a novel human adriamycin-inducible killer
CC   protein located on chromosome 8p21, which also has p53-inducible,
CC   apoptosis-mediating activity and comprises an amino-terminal
CC   extracellular receptor, transmembrane and death domains. The nucleic
CC   acid molecule which encodes the protein, it's encoded signal
CC   transduction protein and antibodies of the invention are useful in the
CC   diagnosis and treatment of neoplastic diseases. The invention is also
CC   useful for the production of animal model systems.
XX
SQ   Sequence   411 AA;


  Query Match             92.5%;  Score 2151.5;  DB 20;  Length 411;
  Best Local Similarity   93.4%;  Pred. No. 2.1e-171;
  Matches  411;  Conservative    0;  Mismatches    0;  Indels   29;  Gaps    1;

Qy       1 MEQRGQNAPAASGARKRHGPGPREARGARPGPRVPKTLVLVVAAVLLLVSAESALITQQD 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 meqrgqnapaasgarkrhgpgpreargarpgprvpktlvlvvaavlllvsaesalitqqd 60

Qy      61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 lapqqraapqqkrsspseglcppghhisedgrdcisckygqdysthwndllfclrctrcd 120

Qy     121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 sgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180

Qy     181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
           ||                            ||||||||||||||||||||||||||||
Db     181 ke----------------------------sgiiigvtvaavvlivavfvcksllwkkv 211

Qy     241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     212 lpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqemevqepaeptgv 271

Qy     301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     272 nmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadlvpfdsweplmrk 331

Qy     361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     332 lglmdneikvakaeaaghrdtlytmlikwvnktgrdasvhtlldaletlgerlakqkied 391

Qy     421 HLLSSGKFMYLEGNADSAMS 440
           ||||||||||||||||||||
Db     392 hllssgkfmylegnadsams 411


RESULT   6
B29790
ID   B29790 standard; Protein; 411 AA.
XX
AC   B29790;
XX
DT   28-FEB-2001  (first entry)
XX
DE   Human death domain containing receptor-5 (DR5).
XX
KW   Human death domain containing receptor-5; DR5; anti-DR5 antibody;
KW   TRAIL binding; TNF-related apoptosis-inducing ligand; pro-apoptotic;
KW   tumour necrosis factor receptor family; TNFR; graft-versus-host disease;
KW   viral infection; cancer; leukaemia; immunodeficiency; autoimmune disease;
KW   T-cell mediated immune response; osteoarthritis; psoriasis; septicaemia;
KW   inflammatory bowel disease; parasitic infection; bacterial infection;
KW   restenosis.
XX
OS   Homo sapiens.
XX
PN   WO200066156-A1.
XX
PD   09-NOV-2000.
XX
PF   04-MAY-2000; 2000WO-US12041.
XX
PR   04-MAY-1999;   99US-0132498.
PR   07-MAY-1999;   99US-0133238.
PR   13-AUG-1999;   99US-0148939.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Ni J,  Gentz RL,  Yu G,  Rosen CA;
XX
DR   WPI; 2000-687447/67.
DR   N-PSDB; C81544.
XX
PT   Treating graft-versus-host disease, viral infection, cancer, leukemia,
PT   immunodeficiency, or an autoimmune disorder comprising administering an
PT   antibody to Death domain containing receptor (DR5) and a second agent -
XX
PS   Claim 1; Fig 1A-B; 266pp; English.
XX
CC   The invention relates to a novel method for treating graft-versus-host
CC   disease, viral infection, cancer, leukaemia, immunodeficiency, or an
CC   autoimmune disorder. The method comprises administering an antibody
CC   specific for human death domain containing receptor-5 (DR5); B29790) and
CC   a second agent selected from TRAIL (TNF-related apoptosis-inducing
CC   ligand), a tumour necrosis factor (TNF), a TNF blocking agent, an
CC   immunosuppressive agent, an antibiotic, an antiinflammatory agent, a
CC   chemotherapeutic agent, or a cytokine. DR5 is a member of the TNF
CC   receptor (TNFR) family, and is a mediator of apoptosis, being able to
CC   bind TRAIL. The method of the invention is useful for the treatment of
CC   graft-versus-host disease, viral infection, cancer, leukemia,
CC   immunodeficiency, or an autoimmune disorder. The DR-5 antibody is useful
CC   for treating or preventing diseases and conditions associated with
CC   increased cell survival and/or insensitivity to apoptosis-inducing
CC   agents. Examples of such diseases are solid tissue cancers and
CC   leukaemias. Antagonists of DR5 are useful for inhibiting T-cell mediated
CC   immune responses, and preventing and/or treating diseases and conditions
CC   associated with T-cell mediated immune responses such as graft-versus-
CC   host responses, osteoarthritis, psoriasis, septicaemia, inflammatory
CC   bowel disease, autoimmune diseases and leukaemia. DR5 nucleotides and
CC   proteins are useful for diagnosis, prevention and/or treatment of
CC   parasitic, bacterial, and viral infections, restenosis and autoimmune
CC   disorders. The present sequence represents human DR5.
XX
SQ   Sequence   411 AA;


  Query Match             92.5%;  Score 2151.5;  DB 21;  Length 411;
  Best Local Similarity   93.4%;  Pred. No. 2.1e-171;
  Matches  411;  Conservative    0;  Mismatches    0;  Indels   29;  Gaps    1;

Qy       1 MEQRGQNAPAASGARKRHGPGPREARGARPGPRVPKTLVLVVAAVLLLVSAESALITQQD 60
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 meqrgqnapaasgarkrhgpgpreargarpgprvpktlvlvvaavlllvsaesalitqqd 60

Qy      61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 lapqqraapqqkrsspseglcppghhisedgrdcisckygqdysthwndllfclrctrcd 120

Qy     121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 sgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180

Qy     181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
           ||                            ||||||||||||||||||||||||||||
Db     181 ke----------------------------sgiiigvtvaavvlivavfvcksllwkkv 211

Qy     241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
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Db    212 lpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqemevqepaeptgv 271

Qy    301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360
Db    272 nmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadlvpfdsweplmrk 331

Qy    361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
Db    332 lglmdneikvakaeaaghrdtlytmlikwvnktgrdasvhtlldaletlgerlakqkied 391

Qy    421 HLLSSGKFMYLEGNADSAMS 440
Db    392 hllssgkfmylegnadsams 411


RESULT   7
W76827
ID   W76827 standard; Protein; 411 AA.
XX
AC   W76827;
XX
DT   25-JAN-1999  (first entry)
XX
DE   Human TR6 protein.
XX
KW   TR6; tumour necrosis factor related receptor; human; treatment; stroke;
KW   inflammation; arthritis; septicaemia; autoimmune disease; restenosis;
KW   transplant rejection; infection; ischaemia; brain injury; bone disease;
KW   acute respiratory disease syndrome; acquired autoimmune disease syndrome;
KW   AIDS; cancer; atherosclerosis; Alzheimers disease.
XX
OS   Homo sapiens.
XX
PN   EP870827-A2.
XX
PD   14-OCT-1998.
XX
PF   23-DEC-1997;   97EP-0310562.
XX
PR   22-AUG-1997;   97US-0916625.
PR   14-MAR-1997;   97US-0041230.
PR   09-MAY-1997;   97US-0853684.
XX
PA   (SMIK ) SMITHKLINE BEECHAM CORP.
XX
PI   Deen KC,  Young PR;
XX
DR   WPI; 1998-523156/45.
DR   N-PSDB; V63094.
XX
PT   DNA encoding tumour necrosis factor receptor TR6 - and corresponding
PT   polypeptide, antibody, agonist, antagonist, etc
XX
PS   Claim 1; Page 27-29; 34pp; English.
XX
CC   This sequence represents a novel human tumour necrosis factor related
CC   receptor, TR6. TR6 polypeptides and polynucleotides can be used in the
CC   treatment of chronic and acute inflammation, arthritis, septicaemia,
CC   autoimmune diseases (e.g. inflammatory bowel disease, psoriasis),
CC   transplant rejection, graft vs. host disease, infection, stroke,
CC   ischaemia, acute respiratory disease syndrome, restenosis, brain injury,
CC   (acquired autoimmune disease syndrome) AIDS, bone diseases, cancer (e.g.
CC   lympho-proliferative disorders), atherosclerosis and Alzheimers disease.
XX
SQ   Sequence   411 AA;


  Query Match             92.1%;  Score 2143.5;  DB 19;  Length 411;
  Best Local Similarity   93.2%;  Pred. No. 9.8e-171;
  Matches  410;  Conservative    0;  Mismatches    1;  Indels   29;  Gaps    1;

Qy      1 MEQRGQNAPAASGARKRHGPGPREARGARPGPRVPKTLVLVVAAVLLLVSAESALITQQD 60
Db      1 meqrgqnapaasgarkrhgpgpreargarpgprvpktlvlvvaavlllvsaesalitqqd 60

Qy     61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
Db     61 lapqqraapqqkrsspseglcppghhisedgrdcisckygqdystqwndllfclrctrcd 120

Qy    121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
Db    121 sgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180

Qy    181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
Db    181 ke----------------------------sgiiigvtvaavvlivavfvcksllwkkv 211

Qy    241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
Db    212 lpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqemevqepaeptgv 271

Qy    301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360
Db    272 nmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadlvpfdsweplmrk 331

Qy    361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
Db    332 lglmdneikvakaeaaghrdtlytmlikwvnktgrdasvhtlldaletlgerlakqkied 391

Qy    421 HLLSSGKFMYLEGNADSAMS 440
Db    392 hllssgkfmylegnadsams 411


RESULT   8
W79261
ID   W79261 standard; Protein; 411 AA.
XX
AC   W79261;
XX
DT   15-FEB-1999  (first entry)
XX
DE   Tumour necrosis factor receptor related protein Tango-63e.
XX
KW   Tango-63e; tumour necrosis factor receptor related protein; human;
KW   apoptosis; cancer; autoimmune disease; neurodegenerative disease.
XX
OS   Homo sapiens.
XX
PN   WO9846643-A1.
XX
PD   22-OCT-1998.
XX
PF   16-APR-1998;   98WO-US07694.
XX
PR   16-APR-1997;   97US-0843652.
XX
PA   (MILL-) MILLENNIUM BIOTHERAPEUTICS INC.
XX
PI   Holtzman D;
XX
DR   WPI; 1998-594562/50.
DR   N-PSDB; V62673.
XX
PT   Isolated tumour necrosis factor related proteins - used to develop
PT   products for the diagnosis and treatment of apoptosis-related
PT   disorders, e.g. cancers, autoimmune disorders or neurodegenerative
PT   disorders
XX
PS   Claim 6; Fig 2; 88pp; English.
XX
CC   This is the amino acid sequence of Tango-63e, a new member of the
CC   human tumour necrosis factor receptor superfamily.  It was deduced
CC   from a human prostate cDNA clone sequence (see V62673).  Two
CC   different forms of Tango-63, i.e. Tango-63e and Tango-63d (see
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CC   W79260), have been identified.  These are identical with the
CC   exception of the deletion of amino acids 183-211 of Tango-63d in
CC   Tango-63e.  The invention also encompasses nucleic acid molecules
CC   encoding Tango-63d and -63e, vectors containing these nucleic acid
CC   molecules, cells harboring recombined DNA encoding Tango-63d and/or
CC   -63e, fusion proteins that include Tando-63d and/or -63e, transgenic
CC   animals that express Tango-63d and/or -63e, and recombinant knockout
CC   animals that fail to express Tango-63d and/or -63e.  Methods are
CC   provided for the diagnosis and treatment of disorders associated
CC   with either an abnormally high or an abnormally low rate of
CC   apoptotic cell death.  Inhibitors can be used for treating e.g.
CC   cancers, autoimmune disorders (e.g. systemic lupus erythematosus
CC   and immune-mediated glomerulonephritis), and viral infections (e.g.
CC   herpesviruses, poxviruses, and adenoviruses).  Agonists can be used
CC   for treating e.g. neurodegenerative diseases, e.g. Alzheimer's
CC   disease, Parkinson's disease, amyotrophic lateral sclerosis (ALS),
CC   Huntington's disease, retinitis pigmentosa, spinal muscular atrophy,
CC   various forms of cerebellar degeneration, anaemia, myelodysplastic
CC   syndrome, ischemic injury, myocardial infarction, cerebral ischemia
CC   or toxin-induced injury.  In addition, T cell mediated diseases,
CC   including AIDS, autoimmune diseases such as rheumatoid arthritis,
CC   and type I diabetes, septic shock, cerebral malaria, graft
CC   rejection, cytotoxicity, cachexia, and inflammation can be treated
CC   by altering the expression or activity of the polypeptides.  The
CC   products can also be used for detection, diagnosis and screening
CC   assays.
XX
SQ   Sequence   411 AA;

  Query Match             92.0%;  Score 2141.5;  DB 19;  Length 411;
  Best Local Similarity   93.2%;  Pred. No. 1.4e-170;
  Matches  410;  Conservative    0;  Mismatches    1;  Indels   29;  Gaps    1;

Qy       1 MEQRGQNAPAASGARKRHGPGPREARGARPGPRVPKTLVLVVAAVLLLVSAESALITQQD 60
           |||||||||||||||||||||||||||||| |||||||||||||||||||||||||||||
Db       1 meqrgqnapaasgarkrhgpgpreargarpglrvpktlvlvvaavlllvsaesalitqqd 60

Qy      61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 lapqqraapqqkrsspseglcppghhisedgrdcisckygqdysthwndllfclrctrcd 120

Qy     121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 sgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180

Qy     181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
           ||                            ||||||||||||||||||||||||||||
Db     181 ke----------------------------sgiiigvtvaavvlivavfvcksllwkkv 211

Qy     241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     212 lpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqemevqepaeptgv 271

Qy     301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     272 nmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadlvpfdsweplmrk 331

Qy     361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     332 lglmdneikvakaeaaghrdtlytmlikwvnktgrdasvhtlldaletlgerlakqkied 391

Qy     421 HLLSSGKFMYLEGNADSAMS 440
           ||||||||||||||||||||
Db     392 hllssgkfmylegnadsams 411


RESULT   9
W93576
ID   W93576 standard; Protein; 411 AA.
XX
AC   W93576;
XX
DT   18-JUN-1999  (first entry)
XX
DE   Human hAPO8 protein.
XX
KW   Tumour necrosis factor receptor; signal transducer molecule; TNF; APO4;
KW   developmental abnormality; gestational abnormalitity; prostate cancer;
KW   APO6; APO8; APO9; TNRL-1; TNRL-3; diagnosis; treatment; therapy; disease;
KW   cytoplasmic domain; immunogen; antibody preparation; breast carcinoma;
KW   apoptosis; human.
XX
OS   Homo sapiens.
XX
PN   WO9911791-A2.
XX
PD   11-MAR-1999.
XX
PF   04-SEP-1998;   98WO-US18393.
XX
PR   05-SEP-1997;   97US-0924634.
XX
PA   (UNIW ) UNIV WASHINGTON.
XX
PI   Chaudhary PM;
XX
DR   WPI; 1999-205191/17.
DR   N-PSDB; X23410.
XX
PT   New Tumor Necrosis Factor family receptor polypeptides and ligands -
PT   useful for diagnosis and treatment of prostate cancer and
PT   developmental or gestational abnormalities
XX
PS   Claim 19; Fig 2; 156pp; English.
XX
CC   This invention describes isolated Tumor Necrosis Factor (TNF) family
CC   receptor polypeptides: APO4, APO6, APO8 and APO9 or their active
CC   fragments, and isolated TNF related ligands 1 and 3 (TNRL1 and TNRL3) or
CC   their active fragments. APO4 is useful for diagnosing prostate cancer
CC   by determining levels of APO4 in an individual. Prostate cancer can also
CC   be treated using APO4 selective binding agents linked to a therapeutic
CC   moiety. APO4 polypeptides are also useful for identifying selective
CC   binding agents, useful in diagnosis/treatment of disease by binding of
CC   agents to the polypeptide/active fragment which is extracellular, or
CC   expressed on the cell surface. The binding is preferably performed in
CC   vivo. APO4 polypeptides/ active fragments are also useful for screening
CC   for agonists and antagonists by binding and observing the changer in APO4
CC   activity. Effective pharmacological agents useful in diagnosis or
CC   treatment of disease are also identified using APO4 polypeptides/active
CC   fragments and APO4 signal transducer molecules that specifically interact
CC   with a cytoplasmic domain of APO4 and detecting a change in level of APO4
CC   activity. The method is performed in vivo or in vitro. APO polypeptides
CC   are all useful as immunogens for preparing antibodies. APO4 is also
CC   useful for diagnosis/treatment of developmental or gestational
CC   abnormalities. APO8 was transfected to human breast carcinoma cell line
CC   MCF-7, and induced apoptosis.
XX
SQ   Sequence   411 AA;

  Query Match             91.9%;  Score 2137.5;  DB 20;  Length 411;
  Best Local Similarity   93.0%;  Pred. No. 3.1e-170;
  Matches  409;  Conservative    0;  Mismatches    2;  Indels   29;  Gaps    1;

Qy       .1 MEQRGQNAPAASGARKRHGPGPREARGARPGPRVPKTLVLVVAAVLLLVSAESALITQQD 60
           |||||||||||||||||||||||||||||| |||||||||||||||||||||||||||||
Db       1 meqrgqnapaasgarkrhgpgpreargarpglrvpktlvlvvaavlllvsaesalitqqd 60

Qy      61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
           |||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 lapqqrvapqqkrsspseglcppghhisedgrdcisckygqdysthwndllfclrctrcd 120

Qy     121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 sgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180
```

```
Qy    181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
          ||                              ||||||||||||||||||||||||||||
Db    181 ke-----------------------------sgiiigvtvaavvlivavfvcksllwkkv 211

Qy    241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    212 lpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqemevqepaeptgv 271

Qy    301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    272 nmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadlvpfdsweplmrk 331

Qy    361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    332 lglmdneikvakaeaaghrdtlytmlikwvnktgrdasvhtlldaletlgerlakqkied 391

Qy    421 HLLSSGKFMYLEGNADSAMS 440
          ||||||||||||||||||||
Db    392 hllssgkfmylegnadsams 411
```

RESULT 10
Y00932
ID Y00932 standard; Protein; 411 AA.
XX
AC Y00932;
XX
DT 02-JUN-1999 (first entry)
XX
DE Human DR5 protein sequence.
XX
KW Human; DR5; DR5s; TRAIL-R3; apoptosis related condition; cancer; therapy;
KW autoimmune disease; viral infection; degenerative disorder;
KW amyotrophic lateral sclerosis; retinitis pigmentosa; ischaemic injury;
KW cerebellar degeneration; myelodysplastic syndrome.
XX
OS Homo sapiens.
XX
PN WO9909165-A1.
XX
PD 25-FEB-1999.
XX
PF 14-AUG-1998; 98WO-US16945.
XX
PR 15-AUG-1997; 97US-0055906.
XX
PA (IDUN-) IDUN PHARM INC.
XX
PI Alnemri ES;
XX
DR WPI; 1999-181035/15.
DR N-PSDB; X27279.
XX
PT Newly isolated polynucleotide encoding a mammalian TRAIL receptor
PT protein - useful in for screening for (ant)agonists that modulate
PT the apoptotic activity mediated by DR5 or TRAIL-R3 proteins
XX
PS Claim 16; Page 58-60; 71pp; English.
XX
CC This sequence is the human TRAIL receptor DR5 of the invention. An
CC antibody against the TRAIL receptors is useful for detecting mammalian
CC DR5 or TRAIL-R3 proteins in a sample. Recombinant cells are useful in
CC bioassays for screening for (ant)agonists of DR5 or TRAIL-R3 proteins.
CC (Ant)agonists identified by the assay are useful for modulating the
CC apoptotic activity mediated by DR5 or TRAIL-R3 proteins. Apoptosis
CC related conditions which are treated in this way, include cancer
CC (e.g. lymphomas and carcinomas), autoimmune diseases (e.g. systemic lupus
CC erythematosus and immune-mediated glomerulonephritis), viral infections
CC (e.g. herpes virus, poxvirus and adenovirus), degenerative disorders
CC (e.g. Alzheimer's disease and Parkinson's disease), amyotrophic lateral
CC sclerosis, retinitis pigmentosa, cerebellar degeneration, myelodysplastic
CC syndromes (e.g. aplastic anaemia) and ischaemic injury (e.g. myocardial
CC infarction and stroke). The polynucleotides can also be used to treat
CC these diseases. Antisense oligonucleotides to the DNA sequences can be
CC used to form a composition that is useful for inhibiting expression of a
CC human DR5 or TRAIL-R3 protein.
XX
SQ Sequence 411 AA;

Query Match 91.9%; Score 2137.5; DB 20; Length 411;
Best Local Similarity 93.0%; Pred. No. 3.1e-170;
Matches 409; Conservative 0; Mismatches 2; Indels 29; Gaps 1;

```
Qy      1 MEQRGQNAPAASGARKRHGPGPREARGARPGPRVPKTLVLVVAAVLLLVSAESALITQQD 60
          |||||||||||||||||||||||||||||| ||||||||||||||||||||||||||||
Db      1 meqrgqnapaasgarkrhgpgpreargarpglrvpktlvlvvaavlllvsaesalitqqd 60

Qy     61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
          |||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 lapqqrvapqqkrsspseglcppghhisedgrdcisckygqdysthwndllfclrctrcd 120

Qy    121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 sgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180

Qy    181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
          ||                              ||||||||||||||||||||||||||||
Db    181 ke-----------------------------sgiiigvtvaavvlivavfvcksllwkkv 211

Qy    241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    212 lpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqemevqepaeptgv 271

Qy    301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    272 nmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadlvpfdsweplmrk 331

Qy    361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    332 lglmdneikvakaeaaghrdtlytmlikwvnktgrdasvhtlldaletlgerlakqkied 391

Qy    421 HLLSSGKFMYLEGNADSAMS 440
          ||||||||||||||||||||
Db    392 hllssgkfmylegnadsams 411
```

RESULT 11
W88410
ID W88410 standard; Protein; 411 AA.
XX
AC W88410;
XX
DT 26-APR-1999 (first entry)
XX
DE Human Apo-2 ligand.
XX
KW Apo-2 ligand; Apo-2DcR; human; tumour necrosis factor receptor;
KW neurodegeneration; autoimmune disease; inflammation; cancer;
KW apoptosis; therapy.
XX
OS Homo sapiens.
XX

FH	Key	Location/Qualifiers
FT	Peptide	1..53
FT		/note= "signal peptide"
FT	Protein	54..411
FT		/note= "mature protein"
FT	Domain	54..182
FT		/note= "extracellular domain"
FT	Domain	183..208
FT		/note= "transmembrane domain"
FT	Domain	209..411
FT		/note= "intracellular domain"
FT	Region	96..137

```
FT                   /note= "cysteine-rich region"
FT   Region          138..179
FT                   /note= "cysteine-rich region"
FT   Domain          324..391
FT                   /note= "death domain"
FT   Misc-difference 410
FT                   /label= Met, Leu
FT                   /note= "encoded by WTG"
XX
PN   WO9858062-A1.
XX
PD   23-DEC-1998.
XX
PF   12-JUN-1998;   98WO-US12456.
XX
PR   18-JUN-1997;   97US-0878168.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Ashkenazi AJ,  Baker KP,  Chuntharapai A,  Gurney A;
PI   Kim KJ,  Wood WI;
XX
DR   WPI; 1999-095340/08.
DR   N-PSDB; V84352.
XX
PT   New Apo-2DcR polypeptide - used for modulation and diagnosis of
PT   apoptosis, e.g. in neurodegeneration
XX
PS   Example 5; Page 61-62; 88pp; English.
XX
CC   This polypeptide comprises human Apo-2 ligand.  The amino acid
CC   sequence was deduced from a nucleotide sequence (see V84352)
CC   produced from overlapping cDNA clones obtained from human kidney
CC   and pancreatic cDNA libraries.  The invention relates to Apo-2DcR
CC   (see W88408), a novel member of the tumour necrosis factor receptor
CC   family that binds to Apo-2 ligand and is involved in apoptosis.
CC   Apo-2DcR polypeptides are used to modulate apoptosis of mammalian
CC   cells (claimed) e.g. in the treatment of neurodegeneration,
CC   autoimmune diseases and inflammation.  The Apo-2DcR polypeptides
CC   are optionally used in conjunction with Apo-2 ligand, the
CC   bioavailability of which is increased by antibody-mediated blockade
CC   of Apo-2DcR.
XX
SQ   Sequence   411 AA;


  Query Match             91.8%;  Score 2135.5;  DB 20;  Length 411;
  Best Local Similarity   93.0%;  Pred. No. 4.6e-170;
  Matches  409;  Conservative    0;  Mismatches    2;  Indels   29;  Gaps    1;

Qy       1 MEQRGQNAPAASGARKRHGPGPREARGARPGPRVPKTLVLVVAAVLLLVSAESALITQQD 60
           |||||||||||||||||||||||||||||| |||||||||||||||||||||||||||||
Db       1 meqrgqnapaasgarkrhgpgpreargarpglrvpktlvlvvaavlllvsaesalitqqd 60

Qy      61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 lapqqraapqqkrsspseglcppghhisedgrdcisckygqdysthwndllfclrctrcd 120

Qy     121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 sgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180

Qy     181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
           ||                          ||||||||||||||||||||||||||||||
Db     181 ke--------------------------sgiiigvtvaavvlivavfvcksllwkkv 211

Qy     241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     212 lpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqemevqepaeptgv 271

Qy     301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     272 nmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadlvpfdsweplmrk 331

Qy     361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     332 lglmdneikvakaeaaghrdtlytmlikwvnktgrdasvhtlldaletlgerlakqkied 391

Qy     421 HLLSSGKFMYLEGNADSAMS 440
           |||||||||||||||||| |
Db     392 hllssgkfmylegnadsaxs 411


RESULT  12
W83321
ID   W83321 standard; Protein; 411 AA.
XX
AC   W83321;
XX
DT   16-MAR-1999  (first entry)
XX
DE   Human Apo-2 protein.
XX
KW   Human; Apo-2; receptor; apoptosis; neurodegenerative disease; cancer;
KW   tumour necrosis factor; TNF; tumour necrosis factor receptor; TNFR;
KW   TNF cytokine.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 410
FT                   /label= unknown
FT                   /note= "encoded by WTG"
XX
PN   WO9851793-A1.
XX
PD   19-NOV-1998.
XX
PF   14-MAY-1998;   98WO-US09704.
XX
PR   09-FEB-1998;   98US-0020746.
PR   15-MAY-1997;   97US-0857216.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Adams CW,  Ashkenazi AJ,  Chuntharapai A,  Kim KJ;
XX
DR   WPI; 1999-045228/04.
DR   N-PSDB; V72526.
XX
PT   Human Apo-2 polypeptide inducing apoptosis - useful to treat
PT   conditions linked with decreased apoptosis e.g. cancer, and produce
PT   antibodies to increase or decrease apoptosis
XX
PS   Claim 1; Fig 1; 134pp; English.
XX
CC   The present sequence represents human Apo-2. Apo-2 can be used
CC   therapeutically to induce apoptosis in mammalian cells, and so is useful
CC   to treat conditions associated with decreased apoptosis e.g. cancer.
CC   Apo-2 is believed to be a new tumour necrosis factor (TNF) receptor
CC   (TNFR). TNF cytokines can induce apoptosis, thought to be initiated by
CC   binding to TNFRs, and Apo-2 triggered caspase-dependent apoptosis. It
CC   can be used to identify agents activating Apo-2, useful to treat
CC   mammalian cancer cells, and to produce Apo-2 chimeras useful
CC   therapeutically (e.g. those containing immunoglobulin sequences can be
CC   inhibit apoptosis) or diagnostically (e.g. those comprising an epitope
CC   tag polypeptide allow Apo-2 detection and purification using anti-tag
CC   antibodies). It can be used to produce antibodies which can be combined
CC   with a (particularly pharmaceutically acceptable) carrier in compositions
CC   or used to produce dimeric molecules (especially homodimeric molecules
CC   comprising first and second Apo-2 antibodies). Agonistic (especially
CC   single-chain) antibodies can be administered to induce apoptosis in
CC   mammalian cancer cells, and antagonistic antibodies used to block
CC   excessive apoptosis (e.g. in neurodegenerative diseases). Apo-2
CC   antibodies may also be used diagnostically e.g. to detect Apo-2
CC   expression in cells/tissues and in Apo-2 purification.
```

```
XX
SQ   Sequence   411 AA;


  Query Match             91.8%;  Score 2135.5;  DB 20;  Length 411;
  Best Local Similarity   93.0%;  Pred. No. 4.6e-170;
  Matches  409;  Conservative    0;  Mismatches    2;  Indels   29;  Gaps    1;

Qy       1 MEQRGQNAPAASGARKRHGPGPREARGARPGPRVPKTLVLVVAAVLLLVSAESALITQQD 60
           ||||||||||||||||||||||||||||| |||||||||||||||||||||||||||||
Db       1 meqrgqnapaasgarkrhgpgpreargarpglrvpktlvlvvaavlllvsaesalitqqd 60

Qy      61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 lapqqraapqqkrsspseglcppghhisedgrdcisckygqdysthwndllfclrctrcd 120

Qy     121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 sgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180

Qy     181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
           ||                           ||||||||||||||||||||||||||||
Db     181 ke----------------------------sgiiigvtvaavvlivavfvcksllwkkv 211

Qy     241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     212 lpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqemevqepaeptgv 271

Qy     301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     272 nmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadlvpfdsweplmrk 331

Qy     361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     332 lglmdneikvakaeaaghrdtlytmlikwvnktgrdasvhtlldaletlgerlakqkied 391

Qy     421 HLLSSGKFMYLEGNADSAMS 440
           |||||||||||||||||| |
Db     392 hllssgkfmylegnadsaxs 411


RESULT  13
Y55805
ID   Y55805 standard; Protein; 411 AA.
XX
AC   Y55805;
XX
DT   29-FEB-2000  (first entry)
XX
DE   Human Apo-2 polypeptide.
XX
KW   Apo-2 polypeptide; immunization; antigen; polyclonal antibody; cancer;
KW   monoclonal antibody; Apo-2L receptor; therapy; apoptosis; autoimmune;
KW   immune-mediated cell death; neurodegenerative; inflammatory.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 410
FT                   /label= unknown
FT                   /note= "encoded by WTG"
XX
PN   WO9964461-A2.
XX
PD   16-DEC-1999.
XX
PF   10-JUN-1999;   99WO-US13197.
XX
PR   12-JUN-1998;   98US-0096637.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Ashkenazi AJ,  Chuntharapai A,  Kim KJ;
XX
DR   WPI; 2000-097520/08.
DR   N-PSDB; Z39630.
XX
PT   Preparation of antibodies using 2 or more different antigens, used for
PT   producing antibodies against Apo-2 ligand receptors useful for inducing
PT   apoptosis, particularly in cancer cells -
XX
PS   Disclosure; Fig 5; 57pp; English.
XX
CC   The invention provides a method for producing antibodies (Abs) by
CC   immunizing an animal with at least two different antigens. The method
CC   comprises: (a) immunizing an animal with at least two different antigens,
CC   to generate polyclonal Abs against each antigen in the animal; (b)
CC   preparing monoclonal Abs (MAbs) using immune cells of the above animal;
CC   and(c) screening the MAbs to identify one or more MAbs which bind to each
CC   antigen. The Abs obtained are Apo-2L receptor (ant)agonists and can be
CC   used for therapy. The Apo-2L receptor Abs can be used for enhancing
CC   immune-mediated cell death in cells expressing Apo-2L receptors.
CC   Agonistic Abs which specifically cross-react with 2 or more different
CC   Apo-2L receptors can be used for inducing apoptosis in mammalian cancer
CC   cells. Antagonistic Abs can be used for blocking apoptosis, e.g. in
CC   neurodegenerative disease, or to block potential autoimmune/inflammatory
CC   effects of Apo-2 resulting from NF-approx.kB activation. The Abs can also
CC   be used for detection, diagnosis and affinity purification. The method
CC   can reduce the number of animals that need to be immunized and sacrificed
CC   in order to make 2 or more MAbs with differing antigen-binding
CC   specificities. The present sequence represents a human Apo-2 polypeptide.
XX
SQ   Sequence   411 AA;


  Query Match             91.8%;  Score 2135.5;  DB 21;  Length 411;
  Best Local Similarity   93.0%;  Pred. No. 4.6e-170;
  Matches  409;  Conservative    0;  Mismatches    2;  Indels   29;  Gaps    1;

Qy       1 MEQRGQNAPAASGARKRHGPGPREARGARPGPRVPKTLVLVVAAVLLLVSAESALITQQD 60
           ||||||||||||||||||||||||||||| |||||||||||||||||||||||||||||
Db       1 meqrgqnapaasgarkrhgpgpreargarpglrvpktlvlvvaavlllvsaesalitqqd 60

Qy      61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 lapqqraapqqkrsspseglcppghhisedgrdcisckygqdysthwndllfclrctrcd 120

Qy     121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 sgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180

Qy     181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
           ||                           ||||||||||||||||||||||||||||
Db     181 ke----------------------------sgiiigvtvaavvlivavfvcksllwkkv 211

Qy     241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     212 lpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqemevqepaeptgv 271

Qy     301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     272 nmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadlvpfdsweplmrk 331

Qy     361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     332 lglmdneikvakaeaaghrdtlytmlikwvnktgrdasvhtlldaletlgerlakqkied 391

Qy     421 HLLSSGKFMYLEGNADSAMS 440
           |||||||||||||||||| |
Db     392 hllssgkfmylegnadsaxs 411


RESULT  14
Y00934
ID   Y00934 standard; Protein; 350 AA.
XX
```

```
AC   Y00934;
XX
DT   02-JUN-1999  (first entry)
XX
DE   Human DR5s protein sequence.
XX
KW   Human; DR5; DR5s; TRAIL-R3; apoptosis related condition; cancer; therapy;
KW   autoimmune disease; viral infection; degenerative disorder;
KW   amyotrophic lateral sclerosis; retinitis pigmentosa; ischaemic injury;
KW   cerebellar degeneration; myelodysplastic syndrome; splice variant.
XX
OS   Homo sapiens.
XX
PN   WO9909165-A1.
XX
PD   25-FEB-1999.
XX
PF   14-AUG-1998;   98WO-US16945.
XX
PR   15-AUG-1997;   97US-0055906.
XX
PA   (IDUN-) IDUN PHARM INC.
XX
PI   Alnemri ES;
XX
DR   WPI; 1999-181035/15.
DR   N-PSDB; X27281.
XX
PT   Newly isolated polynucleotide encoding a mammalian TRAIL receptor
PT   protein - useful in for screening for (ant)agonists that modulate
PT   the apoptotic activity mediated by DR5 or TRAIL-R3 proteins
XX
PS   Claim 16; Fig 5; 71pp; English.
XX
CC   This sequence is the human TRAIL receptor DR5s of the invention. An
CC   antibody against the TRAIL receptors is useful for detecting mammalian
CC   DR5 or TRAIL-R3 proteins in a sample. Recombinant cells are useful in
CC   bioassays for screening for (ant)agonists of DR5 or TRAIL-R3 proteins.
CC   (Ant)agonists identified by the assay are useful for modulating the
CC   apoptotic activity mediated by DR5 or TRAIL-R3 proteins. Apoptosis
CC   related conditions which are treated in this way, include cancer
CC   (e.g. lymphomas and carcinomas), autoimmune diseases (e.g. systemic lupus
CC   erythematosus and immune-mediated glomerulonephritis), viral infections
CC   (e.g. herpes virus, poxvirus and adenovirus), degenerative disorders
CC   (e.g. Alzheimer's disease and Parkinson's disease), amyotrophic lateral
CC   sclerosis, retinitis pigmentosa, cerebellar degeneration, myelodysplastic
CC   syndromes (e.g. aplastic anaemia) and ischaemic injury (e.g. myocardial
CC   infarction and stroke). The polynucleotides can also be used to treat
CC   these diseases. Antisense oligonucleotides to the DNA sequences can be
CC   used to form a composition that is useful for inhibiting expression of a
CC   human DR5 or TRAIL-R3 protein.
XX
SQ   Sequence   350 AA;

  Query Match             76.7%;  Score 1785;  DB 20;  Length 350;
  Best Local Similarity   79.1%;  Pred. No. 6.5e-141;
  Matches  348;  Conservative    0;  Mismatches    2;  Indels   90;  Gaps    1;

Qy       1 MEQRGQNAPAASGARKRHGPGPREARGARPGPRVPKTLVLVVAAVLLLVSAESALITQQD 60
           |||||||||||||||||||||||||||||| |||||||||||||||||||||||||||||
Db       1 meqrgqnapaasgarkrhgpgpreargarpglrvpktlvlvvaavlllvsaesalitqqd 60

Qy      61 LAPQQRAAPQQKRSSPSEGLCPPGHHISEDGRDCISCKYGQDYSTHWNDLLFCLRCTRCD 120
           |||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 lapqqrvapqqkrsspseglcppghhisedgrdcisckygqdysthwndllfclrctrcd 120

Qy     121 SGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVGDCTPWSDIECVH 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 sgevelspcttrntvcqceegtfreedspemcrkcrtgcprgmvkvgdctpwsdiecvh 180

Qy     181 KESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVAVFVCKSLLWKKV 240
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

Db     181 kesgtkhsgeapaveetvtsspgtpaspcslsgiiigvtvaavvlivavfvcksllwkkv 240

Qy     241 LPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQEMEVQEPAEPTGV 300
           |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     241 lpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqemevqepaeptg- 299

Qy     301 NMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADLVPFDSWEPLMRK 360

Db     300 ------------------------------------------------------------ 299

Qy     361 LGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALETLGERLAKQKIED 420
                                           ||||||||||||||||||||||||||||||
Db     300 ----------------------------vnktgrdasvhtlldaletlgerlakqkied 330

Qy     421 HLLSSGKFMYLEGNADSAMS 440
           ||||||||||||||||||||
Db     331 hllssgkfmylegnadsams 350


RESULT  15
W76828
ID   W76828 standard; Protein; 303 AA.
XX
AC   W76828;
XX
DT   25-JAN-1999  (first entry)
XX
DE   Human TR6 partial protein.
XX
KW   TR6; tumour necrosis factor related receptor; human; treatment; stroke;
KW   inflammation; arthritis; septicaemia; autoimmune disease; restenosis;
KW   transplant rejection; infection; ischaemia; brain injury; bone disease;
KW   acute respiratory disease syndrome; acquired autoimmune disease syndrome;
KW   AIDS; cancer; atherosclerosis; Alzheimers disease.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Protein         1..303
FT                   /note= "Partial sequence. Start codon missing"
XX
PN   EP870827-A2.
XX
PD   14-OCT-1998.
XX
PF   23-DEC-1997;   97EP-0310562.
XX
PR   22-AUG-1997;   97US-0916625.
PR   14-MAR-1997;   97US-0041230.
PR   09-MAY-1997;   97US-0853684.
XX
PA   (SMIK ) SMITHKLINE BEECHAM CORP.
XX
PI   Deen KC,  Young PR;
XX
DR   WPI; 1998-523156/45.
DR   N-PSDB; V63095.
XX
PT   DNA encoding tumour necrosis factor receptor TR6 - and corresponding
PT   polypeptide, antibody, agonist, antagonist, etc
XX
PS   Disclosure; Page 30-31; 34pp; English.
XX
CC   This sequence represents a novel human tumour necrosis factor related
CC   receptor, TR6. TR6 polypeptides and polynucleotides can be used in the
CC   treatment of chronic and acute inflammation, arthritis, septicaemia,
CC   autoimmune diseases (e.g. inflammatory bowel disease, psoriasis),
CC   transplant rejection, graft vs. host disease, infection, stroke,
CC   ischaemia, acute respiratory disease syndrome, restenosis, brain injury,
CC   (acquired autoimmune disease syndrome) AIDS, bone diseases, cancer (e.g.
CC   lympho-proliferative disorders), atherosclerosis and Alzheimers disease.
XX
SQ   Sequence   303 AA;
```

Query Match 67.8%; Score 1578.5; DB 19; Length 303;
Best Local Similarity 91.3%; Pred. No. 9.1e-124;
Matches 303; Conservative 0; Mismatches 0; Indels 29; Gaps 1;

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Qy    109 DLLFCLRCTRCDSGEVELSPCTTTRNTVCQCEEGTFREEDSPEMCRKCRTGCPRGMVKVG 168
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1 dllfclrctrcdsgevelspctttrntvcqceegtfreedspemcrkcrtgcprgmvkvg 60

Qy    169 DCTPWSDIECVHKESGTKHSGEAPAVEETVTSSPGTPASPCSLSGIIIGVTVAAVVLIVA 228
          |||||||||||||                              ||||||||||||||||
Db     61 dctpwsdiecvhke----------------------------sgiiigvtvaavvliva 91

Qy    229 VFVCKSLLWKKVLPYLKGICSGGGGDPERVDRSSQRPGAEDNVLNEIVSILQPTQVPEQE 288
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     92 vfvcksllwkkvlpylkgicsggggdpervdrssqrpgaednvlneivsilqptqvpeqe 151

Qy    289 MEVQEPAEPTGVNMLSPGESEHLLEPAEAERSQRRRLLVPANEGDPTETLRQCFDDFADL 348
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    152 mevqepaeptgvnmlspgesehllepaeaersqrrrllvpanegdptetlrqcfddfadl 211

Qy    349 VPFDSWEPLMRKLGLMDNEIKVAKAEAAGHRDTLYTMLIKWVNKTGRDASVHTLLDALET 408
          ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    212 vpfdsweplmrklglmdneikvakaeaaghrdtlytmlikwvnktgrdasvhtlldalet 271

Qy    409 LGERLAKQKIEDHLLSSGKFMYLEGNADSAMS 440
          ||||||||||||||||||||||||||||||||
Db    272 lgerlakqkiedhllssgkfmylegnadsams 303
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Search completed: May 23, 2001, 14:19:24
Job time: 94 sec